

Towards Flight without Stress or Strain... or Weight

BY INTEL, WASHINGTON, D.C.

The following article is by an American journalist who has long taken a keen interest in questions of theoretical physics and has been recommended to the Editors as having close connections with scientific circles in the United States. The subject is one of immediate interest, and Interavia would welcome further comment from initiated sources.

— Editors.

Washington, D.C. — March 23, 1956 : Electro-gravitics research, seeking the source of gravity and its control, has reached a stage where profound implications for the entire human race begin to emerge. Perhaps the most startling and immediate implications of all involve aircraft, guided missiles — atmospheric and free space flight of all kinds.

If only one of several lines of research achieve their goal — and it now seems certain that this must occur — gravitational acceleration as a structural, aerodynamic and medical problem will simply cease to exist. So will the task of providing combustible fuels in massive volume in order to escape the earth's gravitic pull — now probably the biggest headache facing today's would-be "space men".

And towards the long-term progress of mankind and man's civilization, a whole new concept of electro-physics is being levered out into the light of human knowledge.

There are gravity research projects in every major country of the world. A few are over 30 years old.¹ Most are much newer. Some are purely theoretical and seek the answer in Quantum, Relativity and Unified Field Theory mathematics — Institute for Advanced Study at Princeton, New Jersey ; University of Indiana's School of Advanced Mathematical Studies ; Purdue University Research Foundation ; Goettingen and Hamburg Universities in Germany ; as well as firms and Universities in France, Italy, Japan and elsewhere. The list, in fact, runs into the hundreds.

Some projects are mostly empirical, studying gravitic isotopes, electrical phenomena and the statistics of mass. Others combine both approaches in the study of matter in its super-cooled, super-conductive state, of jet electron streams, peculiar magnetic effects or the electrical mechanics of the atom's

shell. Some of the companies involved in this phase include Lear Inc., Gluhareff Helicopter and Airplane Corp., The Glenn L. Martin Co., Sperry-Rand Corp., Bell Aircraft, Clarke Electronics Laboratories, the U.S. General Electric Company.

The concept of weightlessness in conventional materials which are normally heavy, like steel, aluminium, barium, etc., is difficult enough, but some theories, so far borne out empirically in the laboratory, postulate that not only can they be made weightless, but they can in fact be given a negative weight. That is : the force of gravity will be repulsive to them and they will—new sciences breed new words and new meanings for old ones—loft away contra-gravitationally.

In this particular line of research, the weights of some materials have already been cut as much as 30 % by "energizing" them. Security prevents disclosure of what precisely is meant by "energizing" or in which country this work is under way.

A localized gravitic field used as a ponderomotive force has been created in the

laboratory. Disc airfoils two feet in diameter and incorporating a variation of the simple two-plate electrical condenser charged with fifty kilovolts and a total continuous energy input of fifty watts have achieved a speed of seventeen feet per second in a circular air course twenty feet in diameter. More lately these discs have been increased in diameter to three feet and run in a fifty-foot diameter air course under a charge of a hundred and fifty kilovolts with results so impressive as to be highly classified. Variations of this work done under a vacuum have produced much greater efficiencies that can only be described as startling. Work is now under way developing a flame-jet generator to supply power up to fifteen million volts.

Such a force raised exponentially to levels capable of pushing man-carrying vehicles through the air—or outer space—at ultra-high speeds is now the object of concerted effort in several countries. Once achieved it will eliminate most of the structural difficulties now encountered in the construction of high-speed aircraft. Importantly, the gravitic field that provides the basic propulsive force simultaneously reacts on all matter within that field's influence. The force is not a physical one acting initially at a specific point in the vehicle that needs then to be translated to all the other parts. It is an electro-gravitic field acting on all parts simultaneously.

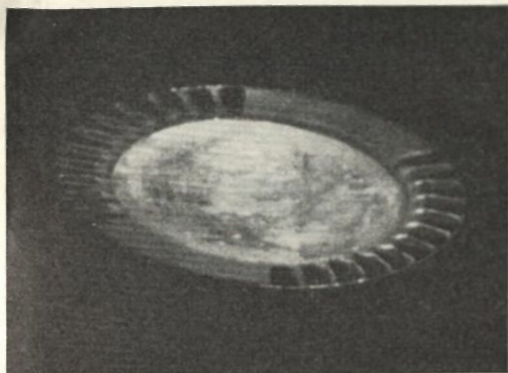
Subject only to the so-far immutable laws of momentum, the vehicle would be able to change direction, accelerate to thousands of miles per hour, or stop. Changes in direction and speed of flight would be effected by merely altering the intensity, polarity and direction of the charge.

Man now uses the sledge-hammer approach to high-altitude, high-speed flight. In the still-short life-span of the turbo-jet airplane, he has had to increase power in the form of brute thrust some twenty times in order to achieve just a little more than twice the speed of the original jet plane. The cost in money



The American scientist Townsend T. Brown has been working on the problems of electrogravitics for more than thirty years. He is seen here demonstrating one of his laboratory instruments, a disc-shaped variant of the two-plate condenser.

¹ Ultimately they go back to Einstein's general theory of relativity (1916), in which the law of gravitation was first mathematically formulated as a field theory (in contrast to Newton's "action-at-a-distance" concept).



Townsend Brown's free-flying condenser. If the two arc-shaped electrodes (on the left and right rims) are placed under electrostatic charge, the disc will move, under the influence of interaction between electrical and gravitational fields, in the direction of the positive electrode. The higher the charge, the more marked will be the electrogravitic field. With a charge of several hundred kilovolts the condenser would reach speeds of several hundred miles per hour.

in reaching this point has been prodigious. The cost in highly-specialized man-hours is even greater. By his present methods man actually fights in direct combat the forces that resist his efforts. In conquering gravity he would be putting one of his most competent adversaries to work for him. Anti-gravitics is the method of the picklock rather than the sledge-hammer.

The communications possibilities of electro-gravitics, as the new science is called, confound the imagination. There are apparently in the ether an entirely new unsuspected family of electrical waves similar to electromagnetic radio waves in basic concept. Electro-gravitic waves have been created and transmitted through concentric layers of the most efficient kinds of electro-magnetic and electro-static shielding without apparent loss of power in any way. There is evidence, but not yet proof, that these waves are not limited by the speed of light. Thus the new science seems to strike at the very foundations of Einsteinian Relativity Theory.

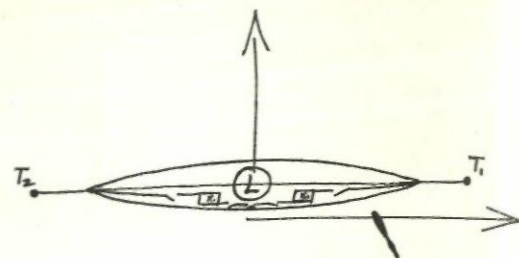
But rather than invalidating current basic concepts such as Relativity, the new knowledge of gravity will probably expand their scope, ramifications and general usefulness. It is this expansion of knowledge into the unknown that more and more emphasizes

how little we do know; how vast is the area still awaiting research and discovery.

The most successful line of the electro-gravitics research so far reported is that carried on by Townsend T. Brown, an American who has been researching gravity for over thirty years. He is now conducting research projects in the U.S. and on the Continent. He postulates that there is between electricity and gravity a relationship parallel and/or similar to that which exists between electricity and magnetism. And as the coil is the usable link in the case of electromagnetics, so is the condenser that link in the case of electro-gravitics. Years of successful empirical work have lent a great deal of credence to this hypothesis.

The detailed implications of man's conquest of gravity are innumerable. In road cars, trains and boats the headaches of transmission of power from the engine to wheels or propellers would simply cease to exist. Construction of bridges and big buildings would be greatly simplified by temporary induced weightlessness etc. Other facets of work now under way indicate the possibility of close controls over the growth of plant life; new therapeutic techniques; permanent fuel-less heating units for homes and industrial establishments; new sources of industrial power; new manufacturing techniques; a whole new field of chemistry. The list is endless . . . and growing.

In the field of international affairs, other than electro-gravitics' military significance, what development of the science may do to raw materials values is perhaps most interesting to contemplate. Some materials are more prone to induced weightlessness than others. These are becoming known as *gravitic isotopes*. Some are already quite hard to find, but others are common and, for the moment, cheap. Since these ultimately may be the vital lofting materials required in the creation of contra-gravitational fields, their value might become extremely high with equivalent rearrangement of the wealth of national natural resources, balance of economic power and world geo-strategic concepts.



Author's sketch of a supersonic space ship roughly 50 ft. in diameter, whose lift and propulsion are produced by electrogravitic forces. The vehicle is supported by a "lofting cake" L consisting of "gravitic isotopes" of negative weight, and is moved in the horizontal plane by propulsion elements T₁ and T₂.

How soon all this comes about is directly proportional to the amount of effort that is put into it. Surprisingly, those countries normally expected to be leaders in such an advanced field are so far only fooling around. Great Britain, with her Ministry of Supply and the National Physical Laboratory, apparently has never seriously considered that the attempt to overcome and control gravity was worth practical effort and is now scurrying around trying to find out what it's all about. The U.S. Department of Defense has consistently considered gravity in the realm of basic theory and has so far only put token amounts of money into research on it. The French, apparently a little more open-minded about such things, have initiated a number of projects, but even these are still on pretty much of a small scale. The same is true throughout most of the world. Most of the work is of a private venture kind, and much is being done in the studies of university professors and in the traditional lofts and basements of badly undercapitalized scientists.

But the word's afoot now. And both Government and private interest is growing and gathering momentum with logarithmic acceleration. The day may not be far off when man again confounds himself with his genius; then wonders why it took him so long to recognize the obvious.

Of course, there is always a possibility that the unexplained 3 % of UFO's, "Unidentified Flying Objects", as the U.S. Air Force calls "flying saucers", are in fact vehicles so propelled, developed already and undergoing proving flights—by whom . . . U.S., Britain . . . or Russia? However, if this is so it's the best kept secret since the Manhattan project, for this reporter has spent over two years trying to chase down work on gravitics and has drawn from Government scientists and military experts the world over only the most blank of stares.

This is always the way of exploration into the unknown.

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Author's diagram illustrating the electrogravitic field and the resulting propulsive force on a disc-shaped electrostatic condenser. The centre of the disc is of solid aluminium. The solid rimming on the sides is perspex, and in the trailing and leading edges (seen in the direction of motion) are wires separated from the aluminium core chiefly by air pockets. The wires act in a manner similar to the two plates of a simple electrical condenser and, when charged, produce a propulsive force. On reaching full charge a condenser normally loses its propulsive force, but in this configuration the air between the wires is also charged, so that in principle the charging process can be maintained as long as desired. As the disc also moves—from minus to plus—the charged air is left behind, and the condenser moves into new, uncharged air. Thus both charging process and propulsive force are continuous.

